

Far From Home? Accessing Everyday Places in Rural and Urban Communities

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Abstract

Objectives: Rural residents are believed to experience greater social isolation than their urban counterparts. This isolation is typically attributed to the structural conditions that distinguish rural communities from urban communities. In the present study, we direct attention to the everyday places that older adults visit across the rural-urban context and the implications this has for direct and indirect social exposure.

Methods: We leverage ecological momentary assessment (EMA) data from the Social Environment and Cognitive Health in Urban and Rural Areas study. Two hundred and forty-eight participants recorded 4,906 valid EMAs. We explore the probability of EMAs being recorded outside the home and how far each EMA was recorded from home based on driving distance and time.

Results: There were no rural-urban differences in the probability of participants being away from home during their EMAs. However, rural participants were located farther from home than urban participants during their non-home EMAs. These latter differences were largely explained by trips to restaurants, stores, and healthcare facilities. There were no observed differences in the time separating participants from their workplaces, other people's homes, religious centers, or other outdoor spaces.

Discussion: Although rural and urban older adults visit the same types of places at remarkably similar rates, rural residents face greater travel burdens when accessing commercial places (e.g., restaurants, stores, and healthcare facilities). These findings suggest that the rural disadvantage is concentrated in commercial activity and carries implications for the types of social exposures that residents are likely to encounter depending on where they live.

Keywords: Rural-urban, social isolation, sociology, multilevel or hierarchical model

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Many studies contrasting rural and urban communities suggest that older adults who live in the former are more socially isolated than those who live in the latter. For example, empirical studies have found that rural residents are likely to participate in fewer group activities than urban residents (Vogelsang, 2016) and find themselves embedded in different—if not smaller—personal networks (Beggs et al., 1996; Fischer, 1982; Roth et al., 2022). Common explanations point to the structural conditions that distinguish rural communities from urban communities.

At the most basic level, rural communities are characterized by relatively sparse populations that are the result of historical development or recent outmigration (Jensen et al., 2020) as well as lower rates of public gathering places (Rhubart et al., 2022). These latter places are particularly noteworthy as they provide unique opportunities to directly and indirectly interact with people whom one might otherwise not have seen had they not visited the place (Finlay et al., 2019; Oldenburg, 1999; Torres, 2025). The relative dearth of such places therefore limits not only the types of social exposures that rural residents may encounter in their daily lives but also the ease with which such exposures may be accessed. Urban communities, meanwhile, are characterized by high population density and abundant supplies of public gathering places. This combination provides urban residents with a wide range of potential social resources such as access to support, information exchange, and even cognitive stimulation (Blau, 1977; Cagney et al., 2020; Fischer 1982; Simmel, 1950; Rose & Fitzgerald, 2022).

Yet focusing solely on the structural conditions that define rurality and urbanicity provides an incomplete picture of the everyday lives of residents as they move throughout their respective communities. It is therefore instructive to direct attention to the specific places that people visit on a daily basis rather than the mere availability of places they could visit (Browning et al., 2021; Cai et al., 2026; York Cornwell & Cagney, 2017). This is particularly relevant given that a wide range of social exposures occur outside people’s private homes (Cagney et al., 2020; Klinenberg, 2018; Morrill et al., 2005; Torres, 2025). The types of resources and opportunities that come from these exposures, however, depend on the places in which they occur. For instance, commercial places

(e.g., shopping centers, restaurants, healthcare facilities) allow residents to purchase goods and receive services, whereas community places (e.g., religious centers, libraries, parks) offer spiritual, intellectual, and recreational opportunities via infrastructures that are often publicly supported. Although both types of places each serve as venues for social exposure, they differ in the types of interactions that patrons are likely to encounter (Feld, 1981; Roth & Peng, 2024; Small & Gose, 2020).

Later life is particularly salient in this context because it is a stage during which people undergo numerous life transitions (e.g., retirement, health declines) and subsequently are likely to restrict their daily geographic mobility (Glass & Balfour, 2003). It is also a life stage during which people typically experience increased reliance on their close social connections (Charles & Carstensen, 2010; Cornwell & Schafer, 2016; Roth, 2020). Collectively, this implies that older adults may be less likely to visit certain places and subsequently engage in fewer chance social encounters if they have to travel farther to reach those places. Yet the distance separating older adults from these places likely depends on their residential context.

In the present study, we draw attention to the everyday places that rural and urban older adults visit outside their homes and the travel burden associated with reaching each place. Understanding where older adults go, and the burden required to get there, has direct implications for the novel social contact, information exchange, and support they are able to access in daily life, particularly as travel burdens are likely to compound with age-related declines in mobility. We explore these issues using ecological momentary assessment (EMA) data from the Social Environment and Cognitive Health in Urban and Rural Areas study, which consists of a probability sample of older adults residing in rural and urban communities within the state of Indiana.

Daily mobility in the rural-urban context

There is increasing evidence that Americans are spending more time within the confines of their homes in recent decades (Sharkey, 2024). Yet this trend belies the fact that people of all ages, including older adults, still routinely leave their homes to carry out activities such as work,

1 shopping, exercise, and leisure (Roth & Peng, 2024; Torres, 2025; York Cornwell & Cagney,
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3 2017). It is less clear, however, whether this basic opportunity for social exposure is experienced
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5 equally across rural-urban contexts. Prior research that highlights the structurally isolating nature
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7 of rurality would imply that older adults in these types of communities would be less likely than
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9 their urban counterparts to leave their homes on a daily basis due to the former's relative lack of
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11 places to visit (Rhubart et al., 2022; Southerland et al., 2024).
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16 At the same time, it is important to consider the non-residential places that people visit during
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18 everyday life given that these places have a profound impact on social connectedness above and
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20 beyond residential location (Klinenberg, 2018; Roth & Peng, 2024; Torres, 2025; York Cornwell
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22 & Goldman, 2020). The structural features of these places shape how they facilitate planned
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24 versus unplanned social interactions as well as the degree to which they induce fleeting versus
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26 sustained social bonds. These features include their general purpose, how welcoming they are to
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28 visitors, and regularly people return to them (Feld, 1981; Small & Gose, 2020). Places organized
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30 around commercial purposes, for instance, tend to draw a range of people whose rotating cast
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32 increases the chances of forming weak ties or other forms of incidental social exposure (Duneier,
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34 2015; Lofland, 1971; Massenkoff & Wilmers, 2025; Oldenburg, 1999; Torres, 2025). Conversely,
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36 places that center around a community purpose (e.g., religious congregations) tend to attract
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38 more homogenous and stable groups of people, thus fostering a social experience rooted more
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40 in belonging than novelty (Krause, 2008).
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43 The distribution of commercial and community places largely depends on the structural
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45 conditions of the communities that house them. Commercial places are disproportionately located
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47 in highly populated areas to maximize profit and ensure market viability (Blanchard & Matthews,
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49 2007; Bull et al., 2001; Richardson et al., 2017). This spatial disparity does not necessarily
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51 preclude rural residents from visiting commercial places, though it suggests that urban residents
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53 who presumably face a lower burden in traveling to such places may be more likely to visit them
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55 on a regular basis. Community places, meanwhile, depend less on population density and more
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on collective organization and public investment—factors that can persist even in sparsely populated areas (Lyson et al., 2001). We therefore anticipate that older adults who live in rural communities will need to travel farther to visit commercial places, but not community places, compared to their urban peers.

Addressing the utilization of different types of places and the travel burdens associated with reaching such places is especially important in the rural-urban context because it points to mechanisms through which geographic residence structures daily social life in older adulthood. Whereas previous studies find that older adults in rural communities participate in organized social activities at lower rates than their urban peers (Vogelsang, 2016) and are embedded within distinctive personal networks (Roth et al., 2022), it is less clear if such rural-urban differences carry over to the specific places that residents visit on a daily basis (i.e., places that offer varying levels of direct and indirect social exposures). Therefore, the present study draws on a rich set of data from a sample of older adults living across multiple rural and urban communities to explore potential mechanisms that promote social life across geographic contexts.

Methods

We use data from the Social Environment and Cognitive Health in Urban and Rural Areas (SECHURA) study. This is a state-representative prospective study of 510 older adults who reside across 41 Indiana counties. Data were collected via two modules. First, all participants completed a computer-assisted personal interview (CAPI) survey in which they underwent a series of clinical cognitive assessments, a personal network battery, and answered questions about their social and lifestyle behaviors as well as their sociodemographic characteristics. After completing the CAPI survey, participants were asked to participate in an EMA module. This required them to install an app on their smartphones, which would alert them with notifications requesting that they respond to four short EMAs per day for the next seven days. These EMAs would ask them what they were doing, where they were, and who they were with at the moment that they first heard

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3 the notification. The notifications were pseudorandom such that they only occurred between
4 8:00am and 8:00pm and were spaced at least two hours apart from one another. Geocoordinates
5 (latitude/longitude) were collected for all valid EMAs. Participants who did not own a smartphone
6 were offered a loaner phone. Two hundred and seventy-three of the 510 participants agreed to
7 participate in the EMA module. Full details on the SECHURA design and implementation can be
8 found elsewhere (Roth et al., 2026).
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15 ***Dependent variables***

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17 There are three dependent variables in this study. First, we created a binary measure of whether
18 a participant was home at the moment they completed an EMA. Second, we measured the driving
19 distance separating a participant from their home at the moment they completed an EMA. This
20 was calculated by pinpointing their EMA coordinates on Google Maps and measuring the shortest
21 number of miles it would take to drive home. Third, we calculated driving time using this same
22 procedure, but now by capturing the number of minutes it would take to traverse the distance. We
23 calculated the latter two measures only for EMAs recorded outside the home since all home-
24 based distances were zero by default.
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35 ***Geographic context***

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37 We used the Indiana County Classification to determine whether participants resided in an urban
38 or rural community (Ayres et al., 2012). This classification system uses a combination of
39 administrative and survey data to describe a geographic context unique to the state of Indiana. It
40 separates the state's 92 counties into three categories ("urban," "mixed/rural," and "rural").
41 SECHURA mainly sampled participants from the "urban" counties and "rural" counties. Although
42 a small subset of participants residing in "mixed/rural" counties was also sampled, we excluded
43 these participants from our main analysis to highlight the starkest geographic differences within
44 the state. We opted for county-level classification over alternative classifications (e.g., census
45 tract) because the structural conditions most relevant to accessibility, such as the availability of
46 commercial establishments and community organizations, operate at the community level rather
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than the neighborhood level. The ICC is particularly well-suited for this purpose as it was developed specifically to characterize community-level geographic context within Indiana using a combination of administrative and survey data. This distinction is contrasted with a supplementary analysis that classifies geographic context at the census tract level using the Rural-Urban Commuting Area codes (see **Supplementary Methods** for details).

Places

Participants were presented with a predetermined list of socially recognizable places to select from that best matched where they were when they first heard the EMA notification. This list included the following response options: "my home," "someone else's home," "workplace," "restaurant/café/bar," "store," "religious center," "outdoors," "healthcare facility," and "other." These categories represent the places that are theoretically relevant to the SECHURA study, which emphasizes private, commercial, and community places (Compennolle et al., 2022; Oldenburg, 1999; Roth et al., 2025; Torres, 2025), as well as the places that participants were most likely to realistically visit during the study period. We recoded "library" ($n=10$) and "park" ($n=10$) as "other" due to the small number of EMAs that were recorded in these places within our sample.

Covariates

We included the following person-level covariates in our final analyses: age (years), gender (man/woman), race (white, black, other), education ($\leq$ high school, technical certificate, some college, college degree), marital status (married, widowed, divorced, never married), employment status (working, retired, other), depressive symptoms measured via the 15-item geriatric depressive scale (Sheikh & Yesavage, 1986), functional limitations measured via difficulty of completing eight activities of daily living (walking one block, walking across a room, bathing or showering, cutting up food, getting in or out of bed, using the toilet including getting up and down, driving a car during the day, driving a car during the night), and personal network size. This latter variable was included as a covariate because people with larger networks may be more likely to leave their homes to visit their network members. A detailed description of the network module is

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3 provided in **Supplementary Methods**. We also included the following EMA-level covariates in
4 our final analysis: day of the week, and time of day (8:00am – 10:00am, 12:00pm – 2:00pm,
5 2:00pm – 4:00pm, 4:00pm – 6:00pm, 6:00pm – 8:00pm; the 10:00am – 12:00pm window was
6 excluded due to methodological design), whether participants were interacting with anyone when
7 they first heard the EMA notification (alone vs not alone), and what the participants were doing
8 (e.g., eating/drinking, socializing, working, shopping, transporting) when they first heard the
9 notification.

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18 **Analytic sample**

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20 The 273 SECHURA participants who enrolled in the EMA module recorded 5,668 valid responses.
21 We applied four criteria to produce our analytic sample. First, participants must have enabled the
22 collection of geocoordinates during the EMAs (168 EMAs dropped across 19 participants).
23 Second, we excluded EMAs that were recorded when participants were out of town for the entire
24 day (e.g., holiday travel, overnight work trips). These instances were identified as EMAs recorded
25 over 50 miles from the participant’s home on days when the participant failed to record a single
26 EMA at their home or workplace (107 EMAs dropped across 24 participants). The 50-mile radius
27 was added to conservatively distinguish these dropped EMAs as recorded outside the
28 participant’s community. An additional 17 EMAs (recorded by 8 participants) were excluded
29 because they were also recorded over 50 miles from home, and evidence suggested participants
30 had been in their hometown that morning but left later in the day and did not return home. Third,
31 participants had to complete all relevant EMA questions that were used as covariates in the final
32 models (74 EMAs dropped across 19 participants). Fourth, participants must live in a county that
33 was listed by the Indiana County Classification as either “urban” or “rural” (396 EMAs dropped
34 across 19 participants). The EMAs from the 19 participants who live in a “mixed” county were later
35 reincorporated into a sensitivity analysis that substituted population density for county
36 classification. Collectively, these four criteria resulted in a sample of 4,906 EMAs produced by
37 248 participants.

Analytic strategy

Our analysis proceeded in multiple steps. We first presented the descriptive statistics of the sample at the participant and EMA levels. Next, we ran a series of random intercept models to estimate whether EMAs were recorded away from home (Model 1), the driving distance for each EMA (Model 2), and the driving time for each EMA (Model 3). These models accounted for the hierarchical structure of the data (EMAs nested within participants) by including a grand intercept (held constant across all observations) and a participant-level intercept. Model 1 used the previously mentioned criteria that produced the analytic sample of 4,906 EMAs. Models 2 and 3, which restrict the analysis to non-home EMAs where the participant selected an activity other than “transporting”, had analytic samples of 1,212 EMAs produced by 215 participants. As part of our sensitivity analyses, we estimated additional models that expand the sample by including participants who live in the “mixed/rural” counties. We repeated the model predicting driving time with an interaction between place and rurality to assess whether rural participants spend more time traveling to specific places (e.g., healthcare facilities) than urban participants. This latter model was used to visually plot the average marginal effects depicting the difference in minutes between rural and urban participants. All models presented the parameter estimates, robust standard errors, and *p*-values. These models used probability weights that accounted for sampling design and baseline response rates, including whether participants agreed to complete the EMA module (see Roth et al. [2026] for further detail on EMA participation). Stata 18 was used to conduct the analysis (StataCorp, 2023). Regression diagnostics are documented in **Supplementary Methods**.

Results

Table 1 presents the descriptive statistics for the sample at the participant level. The mean age of the participants was 67.29 years; 69% were women and 91% identified as White. Rural participants were more likely to be women (76%) and White (98%) compared to urban participants

(64% women and 86% White). In the overall sample across the study period, the average within-person driving distances were 2.94 miles and driving times were 4.64 minutes. Rural participants had both higher average driving distances (3.97 miles vs 2.32 miles) and driving times (5.55 min vs 4.07 min) than urban participants. See **Supplementary Figure 1** for the distribution of the person-level averages.

Table 2 presents the descriptive statistics at the EMA level. A majority of all EMAs (73%) were recorded within the home, a statistic comparable to other EMA studies on older adults (Compernelle et al., 2022). Although there was a significant difference in the types of places that rural and urban participants spent their time ($\chi^2 = 23.07, p < 0.01$), the differences were negligible substantively. Rural participants were at home during 71% of the EMAs (compared to 73% for urban participants) and were at another's home during 5% of the EMAs (compared to 3% for urban participants). Otherwise, participants showed no geographic differences in the remainder of the places they visited (e.g., workplace, restaurants, stores, healthcare facilities). These findings suggest that rural and urban residents visit the same types of places at remarkably similar rates.

As denoted in **Table 2**, the descriptive statistics for driving distance and driving time refer to the 1,212 EMAs recorded outside the participant's home. This exclusion criterion was applied because driving distance and driving time were automatically zero if participants were inside the home. Driving distance and driving time were highly correlated ($r = 0.98$), but this correlation decreased when focusing on EMAs that were recorded within a close range from home ($r = 0.93$ for EMAs recorded within 25 miles of home; $r = 0.78$ within 10 miles of home; and $r = 0.55$ within 5 miles of home). These correlations were intended to provide a descriptive observation rather than a formal analysis. As shown in the first row of **Table 2**, rural participants were located significantly farther from home—in both miles and minutes—than urban participants at the moment when they completed their non-home EMAs. These were, however, bivariate differences

that do not account for contextual factors (e.g., sociodemographic characteristics and activity type) or the hierarchical structure of the data (EMAs nested within participants).

Table 3 addresses these latter issues by showing the output from the three regression models. Model 1, a random-intercept logistic regression, drew on all 4,906 EMAs to assess whether participants were at home or away from home during the moment they completed their EMAs. There was no evidence from this model to suggest that rural participants were more likely than urban participants to report being away from home while recording their EMAs (OR = 1.36, 95% CI = 0.89, 2.09). This was also true when estimating a bivariate model in which rurality was the only predictor variable (see **Supplementary Table 1**). Unsurprisingly, Model 1 showed that the type of activity (e.g., socializing, working) was a better predictor than rurality of whether the participant was home or away during the EMA.

Models 2 and 3 focused on the 1,212 EMAs that participants recorded while outside of their homes. These random-intercept linear models estimated the number of miles and minutes participants were located from home, respectively. As shown in Model 2, rural participants were, on average, located 5.45 miles (95% CI = 1.77, 9.14) farther from home than urban participants, adjusting for covariates. Based on post-regression estimates, rural participants were located an average of 13.42 miles from home (95% CI = 9.96, 16.88) during their EMAs compared to 7.97 miles (95% CI = 5.77, 10.16) for urban participants, adjusting for covariates. The rural-urban differences were similar when looking at driving time rather than distance. Model 3 showed that rural participants were located 5.29 minutes farther from home (95% CI = 1.49, 9.09) than urban participants during their EMAs. Findings from Models 1-3 were largely consistent with those from a set of sensitivity models that substituted the rural-urban dummy variable with a continuous measure of population density (see **Supplementary Table 2**). These latter models, which had the advantage of including participants who resided in “mixed/rural” counties, showed a clear negative association between the population density of a participant’s home community and the distance separating them from home during the EMA session.

Figure 1 presents the average marginal effects (AMEs) of rurality across types of places. Derived from a model that interacts place by rurality (see **Supplementary Table 3**), these values contextualized the overall disparities highlighted in Models 2 and 3. As shown in **Figure 1**, there were no significant rural-urban differences in the time it took to reach another's home (AME = 5.54 min, 95% CI = -0.05, 11.13), the workplace (AME = 1.97 min, 95% CI = -4.87, 8.82), religious centers (AME = 6.84 min, 95% CI = -6.48, 20.17), outdoor areas (AME = 1.01 min, 95% CI = -7.63, 9.64), and other non-disclosed places (AME = 3.29 min, 95% CI = -9.15, 15.74). Yet, rural participants spent significantly more time than urban participants traveling to commercial places such as restaurants (AME = 9.02 min, 95% CI = 0.14, 17.89), stores (AME = 9.31 min, 95% CI = 3.06, 15.55), and healthcare facilities (AME = 11.25 min, 95% CI = 3.19, 19.32).

Discussion

This study contrasted the everyday places older adults visit outside of their homes using geocoded EMA data from a state representative sample. Although stereotypical narratives of rural communities depict older residents as living in a perennial state of isolation, our analyses offer a nuanced understanding of the types of places they visit in their daily lives and how the distance separating these places differs from those in urban areas. Several noteworthy findings emerged.

At the most basic level, we found no consistent evidence that rural participants were less likely than urban participants to be outside the home during any of the four randomly sampled moments collected each day. Initially, there was a slight difference in the proportion of EMAs that participants recorded from home (71% rural vs 73% urban), but this difference washed out after accounting for the hierarchical structure of the data. Although recent studies have found convincing evidence that Americans are increasingly likely to spend their free time within the confines of their own homes (Sharkey, 2024), our analyses suggest no discernible rural-urban differences in this rudimentary form of isolation. There was a slight deviation in the proportion of EMAs recorded from someone else's home (5% rural vs 3% urban), though this difference was

rather small considering that it constituted a minority of the EMAs recorded by rural participants and urban participants. Looking beyond private residence, we found no clear evidence that rural and urban participants differed in the other types of places they visited during the study period. These null findings suggest that previously documented rural-urban disparities in the availability of certain types of places, such as restaurants and healthcare facilities (e.g., Bull et al., 2001; Rhubart et al., 2022), do not appear to manifest into observable rates of utilization.

There were, however, notable differences in the distance and time it took participants to reach their non-residential places. On average, rural participants were located farther from home than urban participants during their EMAs. These differences were largely explained by the types of places participants visited. Rural participants spent significantly more time than urban participants traveling to commercial places (e.g., restaurants, stores, healthcare facilities) but no more time traveling to community places (e.g., religious centers, outdoor areas) or private places (e.g., another's home). These findings suggest that the rural accessibility disadvantage does not apply uniformly to all aspects of daily life but rather is concentrated on commercial activity.

The commercial place finding is particularly noteworthy given that sociologists have long observed that places such as restaurants, bars, and cafés serve as sites of social exposure between patrons (Klinenberg, 2018; Massenkoff & Wilmers, 2025; Oldenburg, 1999). Such social exposure may come in the form of direct interaction between friends who planned to meet at the location (Marsden & Srivastava, 2012), long-standing acquaintances who could realistically expect to see each other at the location (Duneier, 2015; Torres, 2025), or familiar strangers who visually recognize each other by virtue of repeatedly visiting the location (Lofland, 1971). Social exposure may also refer to indirect social contact between people, such as sitting nearby one another or reading each other's behaviors (Anderson, 2011; Finlay et al., 2019). All these types of exposures offer patrons of commercial places opportunities to pass along valuable information via weak ties (Granovetter, 1995), engage in cognitively stimulating interactions (Hyun et al., 2025; Perry et al., 2022; Zhaoyang et al., 2021), or simply embrace the vibrant feeling that comes

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3 from being near people (Finlay et al., 2019). Most of these benefits, however, are likely to emerge
4 via repeated visits to such places rather than any single visit (Feld, 1981). This important
5 theoretical insight suggests that rural residents, who were not found to visit commercial places
6 any less frequently than urban residents, do not appear to be meaningfully excluded from the
7 potential social benefits of commercial places. Yet they are paying a higher cost in the time it
8 takes to visit these places.
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11 Although the remaining places that we explored (e.g., religious centers, other people's homes,
12 outdoor areas, workplaces) may also serve as sources of social exposure, the nature and
13 byproducts of these exposures differ in important ways. Religious centers operate with the
14 intention of fostering a spiritual community rooted in shared identity and regular attendance
15 (Krause, 2008). Attending religious services may therefore offer benefits such as community
16 building and feelings of belonging that are less likely to occur in commercial places (cf. Finlay et
17 al. 2019). Visits to other people's homes, meanwhile, tend to involve pre-existing relationships
18 and planned contact. (Our participants reported being in the presence of family or friends during
19 81% of the instances in which they were at someone else's home.) Similar to religious centers,
20 visits to private homes may also foster a sense of belonging and build solidarity but are unlikely
21 to lead to the types of novel information exchange or cognitively stimulating experiences that tend
22 to occur during serendipitous social encounters (Anderson, 2011; Granovetter, 1995; Perry et al.,
23 2022). Outdoor areas, which may include socially recognizable settings such as parks, can
24 facilitate unplanned encounters with familiar strangers and acquaintances (Anderson, 2011), yet
25 they typically lack the structural features that encourage repeated social exposure over time (cf.
26 Munch 2005). Workplaces, meanwhile, are typically semi-private places that people visit to carry
27 out a specific job or task. Although socially interacting while at work is relatively common, these
28 interactions overwhelmingly occur with co-workers and clients rather than family, friends,
29 acquaintances, or complete strangers (Roth & Peng, 2024). Ultimately, we found no evidence
30 that rural participants faced a meaningful travel burden when accessing any of these places.
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These null findings reinforce our conclusion that the rural disadvantage in accessibility is specifically concentrated in the commercial places.

There are several limitations to this study. First, our findings should not be interpreted as time use. For example, the finding that 27% of EMAs were recorded away from home does not necessarily imply that respondents spent that same percentage of their waking hours away from home. EMAs are designed to gather snapshots rather than continuous time use (Roth, 2024). An exception to this would be if the EMA study was designed to passively collect GPS coordinates consistently throughout the study period (Cai et al., 2022), a strategy SECHURA did not implement. Second, our measures of distance and time captured the most direct driving route between a participant's home and their EMA location and did not factor in the departure time. It is possible that the participants opted for an indirect route, used a different transportation method, or faced longer driving times depending on the time of day. Third, we excluded out-of-town EMAs that were presumably recorded during overnight trips. Although we maintain that this was a practical decision given that the data collection straddled the winter holidays, we had to infer such out-of-town trips via the time-ordered sequencing of EMAs in addition to using a 50-mile threshold. It is possible that some of the EMAs were misspecified as part of this procedure. Fourth, while our data accurately measured how far participants were from their homes through the use of geocoordinates, they were subject to moment selection bias (i.e., systematic failure to record an EMA during certain moments). Previous research has suggested that participants are less likely to respond to an EMA notification if they are outside their home (Peng et al., 2026). Although this potential bias undermines our ability to estimate the degree to which participants leave their home, it would bias the rural-urban findings only if rural participants were more likely than urban participants to ignore EMA notifications while outside of the home (or vice versa). This latter condition is not directly possible to ascertain in the absence of geocoded non-responses. However, a prior study on EMA compliance within the SECHURA sample found no clear evidence

that rural participants systematically missed more EMAs during the study period than urban participants (Roth et al., 2026).

Conclusion

This study explored how older adults utilize everyday places across geographic contexts. We found that rural and urban residents visit a variety of places within their respective communities at remarkably similar rates. However, there are notable differences in the amount of time it takes for them to reach these places, with rural residents facing a higher travel burden, especially when visiting commercial places. Although the observed time burdens appear relatively small, they may prove increasingly difficult to overcome as individuals age. Ultimately, understanding where older adults go in their daily lives and the associated time costs have implications for the types of social interactions they are likely to encounter (or miss) depending on where they live.

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Conflict of interest

A. R. Roth is the organizer of the supplement, in which this article is published, but was not involved in the manuscript’s review process or decision to accept it for publication. Other authors have no conflicts to declare.

Ethics approval

The SECHURA study was approved by the Institutional Review Board at Indiana University (IRB-IUB-16000) and exempted by the Institutional Review Board at Oklahoma State University (IRB-22-351).

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Table 1. Participant descriptive statistics

Variables	All (N=248)		Urban (n=148)		Rural (n=100)		Δ t / χ^2
	Mean (SD) or prop.	Min, Max	Mean (SD) or prop.	Min, Max	Mean (SD) or prop.	Min, Max	
Distance ^a	2.94 (4.75)	0, 34.57	2.32 (3.62)	0, 23.32	3.97 (6.17)	0, 34.57	2.71**
Time ^a	4.64 (5.41)	0, 32.58	4.07 (4.64)	0, 23.89	5.55 (6.48)	0, 67.20	2.13*
Age	67.29 (7.83)	53, 88	66.93 (7.61)	55, 88	67.82 (8.15)	53, 88	0.88
Gender							3.89*
Man	0.31		0.36		0.24		
Woman	0.69		0.64		0.76		
Race							12.35**
White	0.91		0.86		0.98		
Black	0.07		0.11		0.00		
Other	0.02		0.02		0.02		
Education							7.58
High school or less	0.25		0.16		0.37		
Technical certificate	0.12		0.11		0.14		
Some college	0.21		0.22		0.19		
College	0.42		0.51		0.30		
Marital status							4.73
Married	0.46		0.43		0.50		
Divorced	0.30		0.30		0.46		
Widowed	0.17		0.18		0.37		
Never married	0.07		0.09		0.17		
Occupational status							2.41
Retired	0.48		0.47		0.48		
Working	0.36		0.39		0.32		
Other	0.16		0.14		0.20		
Network size	5.66 (3.11)	1, 20	6.24 (3.43)	1, 20	4.81 (2.34)	1, 11	3.65***
GDS-15	2.86 (2.83)	0, 14	2.66 (2.82)	0, 14	3.15 (2.82)	0, 13	1.33
ADL	0.23 (0.30)	0, 1.67	0.20 (0.28)	0, 1.67	0.27 (0.32)	0, 1.67	1.83
ICC							
Urban	0.60		--		--		
Rural	0.40		--		--		
Population density	658.74 (815.42)		1,047.28 (860.02)		83.70 (30.95)		11.19***

Notes. SD = standard deviation; ICC = Indiana county classification; GDS-15 = Geriatric depressive symptoms; ADL = Activities of daily living.

^a Distance and time are within-person averages across all ecological momentary assessments reported per participant.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 2. EMA descriptive statistics

Variables	All (N=4,906)		Urban (n=3,086)		Rural (n=1,820)		Δ t / χ^2
	Mean (SD) or prop.	Min, Max	Mean (SD) or prop.	Min, Max	Mean (SD) or prop.	Min, Max	
Distance (miles) ^a	10.61 (17.76)	0.10, 203.73	8.49 (13.45)	0.21, 174.07	13.91 (21.94)	0.10, 203.72	2.96**
Time (minutes) ^a	17.00 (17.25)	0.48, 186.87	15.12 (13.73)	0.96, 165.33	19.95 (21.32)	0.48, 186.87	2.85**
Activity							3.55
<i>Eating/drinking</i>	0.14		0.14		0.14		
<i>Socializing</i>	0.09		0.09		0.09		
<i>Relaxing</i>	0.29		0.29		0.28		
<i>Working</i>	0.15		0.15		0.15		
<i>Other</i>	0.34		0.33		0.35		
Place							23.07**
<i>Respondent's home</i>	0.73		0.73		0.71		
<i>Another's home</i>	0.03		0.03		0.05		
<i>Workplace</i>	0.10		0.10		0.10		
<i>Restaurant</i>	0.02		0.02		0.02		
<i>Store</i>	0.03		0.03		0.03		
<i>Religious center</i>	0.01		0.01		0.01		
<i>Outdoors</i>	0.02		0.02		0.02		
<i>Healthcare facility</i>	0.01		0.02		0.01		
<i>Other</i>	0.05		0.05		0.05		
Day							0.51
<i>Sunday</i>	0.14		0.14		0.14		
<i>Monday</i>	0.15		0.15		0.14		
<i>Tuesday</i>	0.14		0.14		0.14		
<i>Wednesday</i>	0.15		0.15		0.15		
<i>Thursday</i>	0.15		0.14		0.15		
<i>Friday</i>	0.14		0.14		0.14		
<i>Saturday</i>	0.14		0.14		0.14		
Time							2.96
<i>8:00am – 10:00am</i>	0.23		0.24		0.22		
<i>12:00pm – 2:00pm</i>	0.19		0.19		0.20		
<i>2:00pm – 4:00pm</i>	0.19		0.18		0.19		
<i>4:00pm – 6:00pm</i>	0.19		0.19		0.19		
<i>6:00pm – 8:00pm</i>	0.21		0.21		0.21		

Notes. EMA = ecological momentary assessment.

^a Distance and time apply to the 1,212 EMAs that occurred outside participant homes.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 3. Multilevel regression models

Variables	Away from home			Driving distance			Driving time		
	Model 1			Model 2			Model 3		
	OR	SE	p	OR	SE	p	OR	SE	p
Activity (ref: <i>Eating/drinking</i>)									
<i>Socializing</i>	3.82***	1.17	<0.001	1.77	2.08	0.40	1.51	2.38	0.53
<i>Relaxing</i>	0.10***	0.03	<0.001	9.20	5.49	0.09	10.11	6.27	0.11
<i>Working</i>	5.65***	1.96	<0.001	-0.39	1.80	0.83	-0.63	2.03	0.76
<i>Other</i>	2.27**	0.54	<0.001	0.73	2.26	0.75	-0.22	2.57	0.93
Place (ref: <i>Another's home</i>)									
<i>Workplace</i>				3.38	2.43	0.16	3.59	2.52	0.15
<i>Restaurant</i>				3.69	2.91	0.21	3.65	3.25	0.26
<i>Store</i>				1.22	1.75	0.48	1.70	1.92	0.38
<i>Religious center</i>				-2.89	3.28	0.38	-1.81	3.54	0.61
<i>Outdoors</i>				-5.93**	2.27	<0.01	-6.61**	2.54	<0.01
<i>Healthcare facility</i>				-0.79	3.13	0.80	-0.49	3.13	0.88
<i>Other</i>				1.50	2.33	0.52	0.90	2.39	0.71
ICC (ref: <i>Urban</i>)									
<i>Rural</i>	1.36	0.30	0.16	5.45**	1.88	<0.01	5.29**	1.94	<0.01
Intercept	0.15	0.23	0.22	4.05	11.51	0.73	10.88	12.17	0.37
Clusters		248			215			215	
Observations		4,906			1,212			1,212	

Note: OR = Odds ratio; β = beta coefficient; SE = robust standard error, ICC = Indiana County Classification. Model 1 is a multilevel logistic regression model that predicts whether an ecological momentary assessment was recorded outside participant's home. Models 2-3 are multilevel linear regression models that predict distance (Models 2) and time (Models 3). All models adjust for the following covariates: age, gender, race/ethnicity, education, marital status, occupational status, network size, depressive symptoms, activities of daily living, day of week, and time of day. Full models are available in **Supplementary Table 4**. ** $p < 0.01$; *** $p < 0.001$.

Figure 1. Average marginal effects of rurality in driving time to places

Alt Text: The bars show the difference in minutes that it would take rural respondents to drive home from each place compared to urban respondents. Statistical differences (with 95% confident intervals) are calculated via average marginal effects from the model shown in Supplementary Table 3 that interacts place by rurality. Bars are colored according to their social function: Red = residential place, yellow = professional place, blue = commercial place, green = community place, gray = undetermined place.

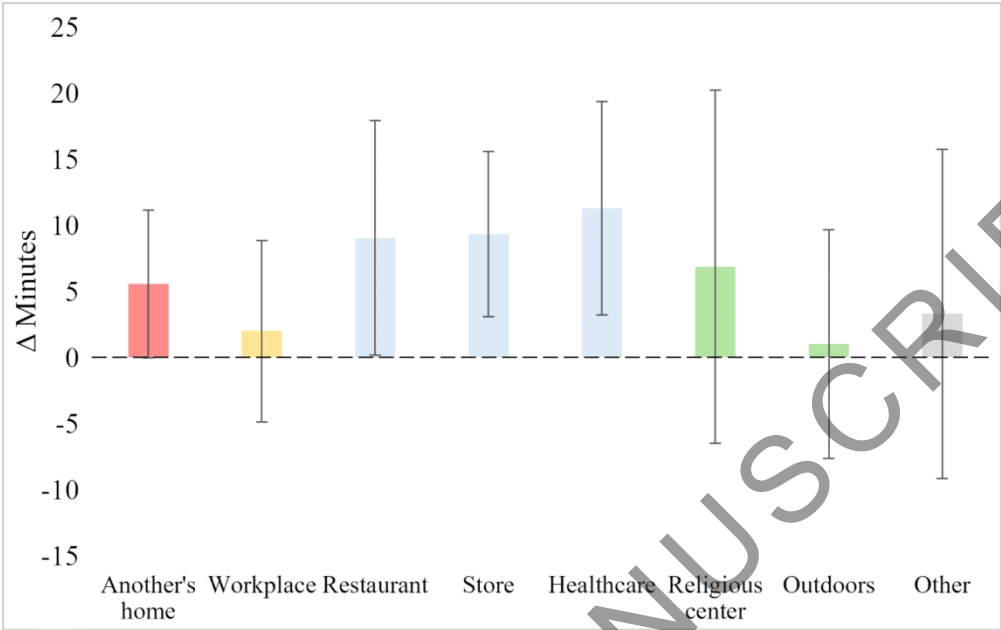


Figure 1

281x176mm (130 x 130 DPI)